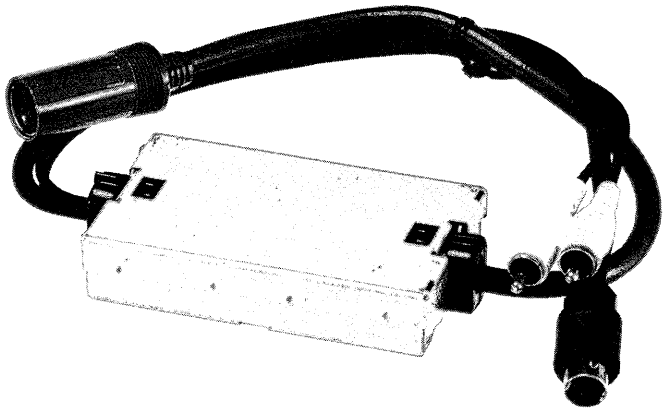
XA-18MK2

SERVICE MANUAL



US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SPECIFICATIONS

Compatible master unit: The car audio of SONY BUS (UNILINK)
Compatible CD changer: CDX-A30/A15/A11/A50/A100/A55
Mounting dimensions: Approx. 55 × 20 × 90 mm (w/h/d)
(Not including the part of projection)
Weight: Approx. 200 g (Adapter only)

TRANSFORMATION ADAPTER

SONY®

SERVICING NOTE

Flexible Circuit Board Repairing

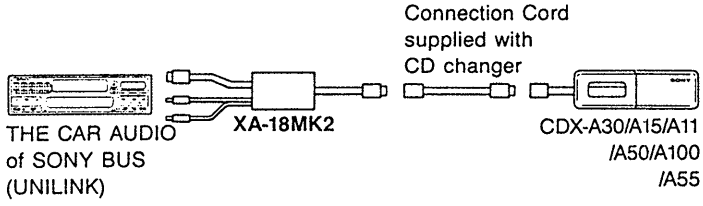
- Keep the temperature of the soldering iron around 270 ℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

This section is extracted from instruction manual.

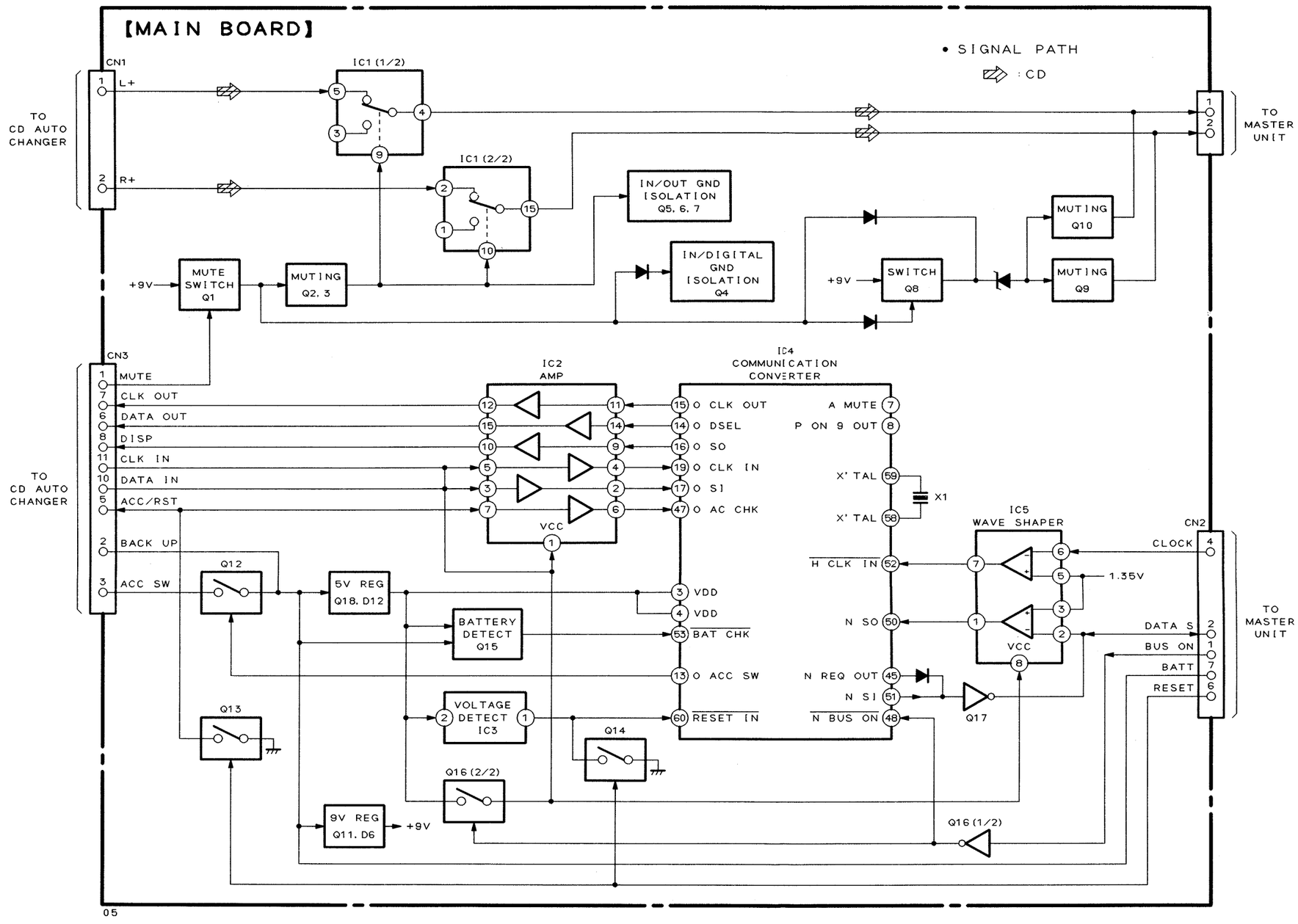
SECTION 1
GENERAL



- You can control next functions only: [CD] [|◄◄ AMS ►►|] [– DISC +]
- No-control functions: [FILE] [BANK] [LIST] [1] ~ [10]
- Use the connection cord supplied with CD changer.
- You cannot use the SONY BUS (UNILINK) selector.
- There is often a noise, when you use [|◄◄ AMS ►►|] of CDX-A55. It's not a trouble.

SECTION 2
DIAGRAMS

2-1. BLOCK DIAGRAM

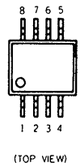


• Semiconductor Location

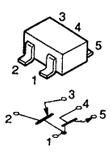
Ref. No.	Location	Ref. No.	Location
D1	C-6	Q1	D-5
D2	C-7	Q2	C-7
D3	D-10	Q3	D-6
D4	D-10	Q4	D-7
D5	D-12	Q5	D-8
D6	D-14	Q6	C-9
D7	E-6	Q7	C-8
D8	G-10	Q8	D-11
D9	E-11	Q9	C-13
D10	H-11	Q10	C-13
D11	E-12	Q11	D-13
D12	G-13	Q12	G-5
		Q13	G-5
IC1	C-10	Q14	E-6
IC2	F-6	Q15	E-11
IC3	E-7	Q16	E-12
IC4	G-9	Q17	H-10
IC5	G-12	Q18	G-14

• Semiconductor Lead Layouts

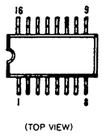
LM2903M



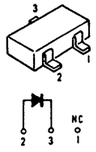
FMC2



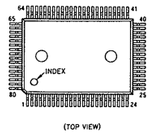
TC4050BF
TC4053BFHB



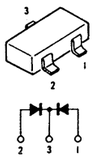
RD6.2M-B2
RD9.1M-B2



μPD75512GF-193-3B9



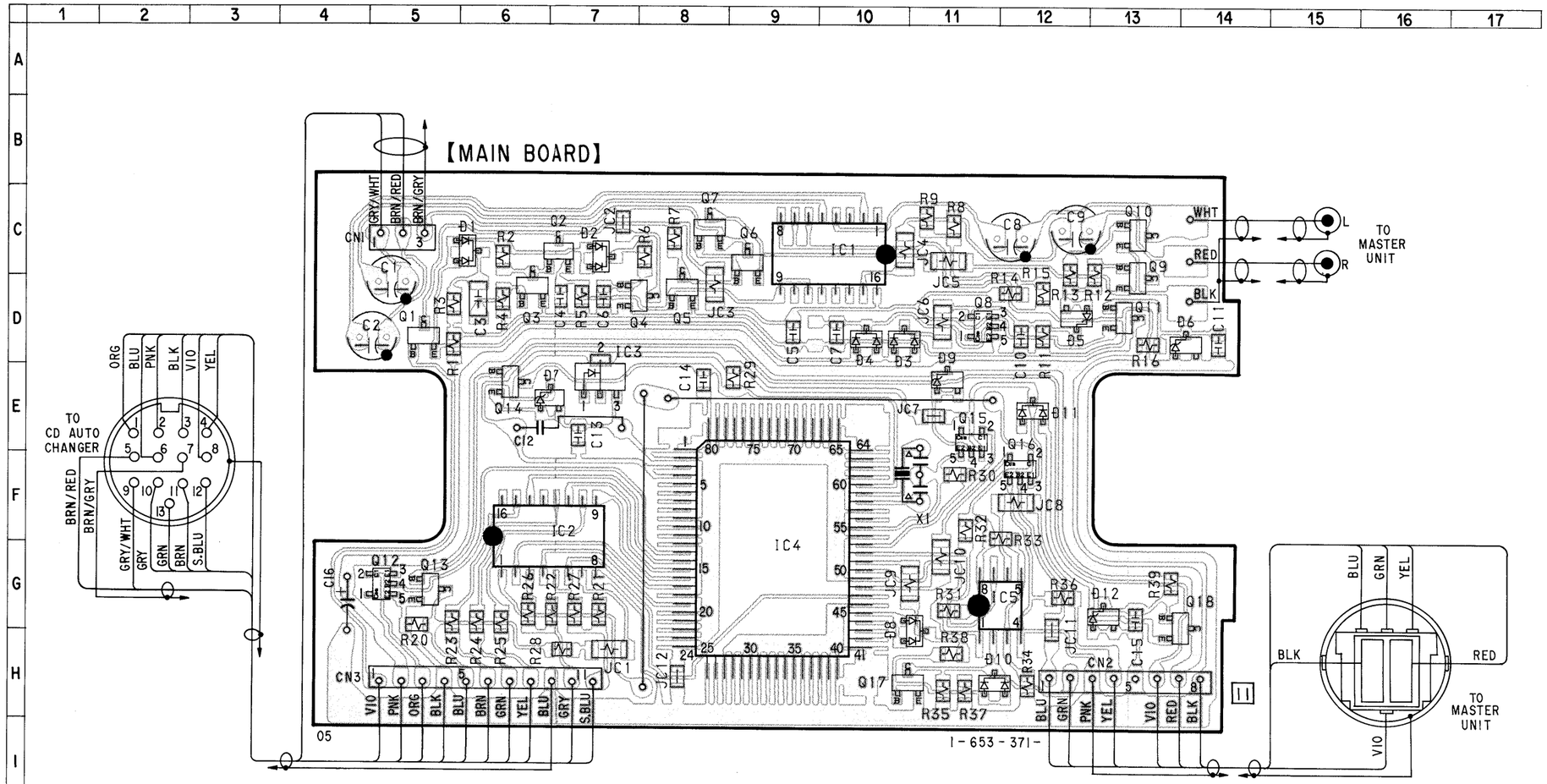
1SS184



Note:

- ○——— : parts extracted from the component side.
- △ : internal component.

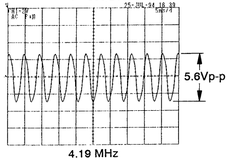
2-2. PRINTED WIRING BOARD



2-3. SCHEMATIC DIAGRAM

• Waveform

❶ IC4 ㉚ 0.5V/DIV
1 μ sec/DIV



【MAIN BOARD】

IC1 SWITCH

IC2 AMP

IC3 VOLTAGE DETECT

IC4 COMMUNICATION CONVERTER

IC5 WAVE SHAPER

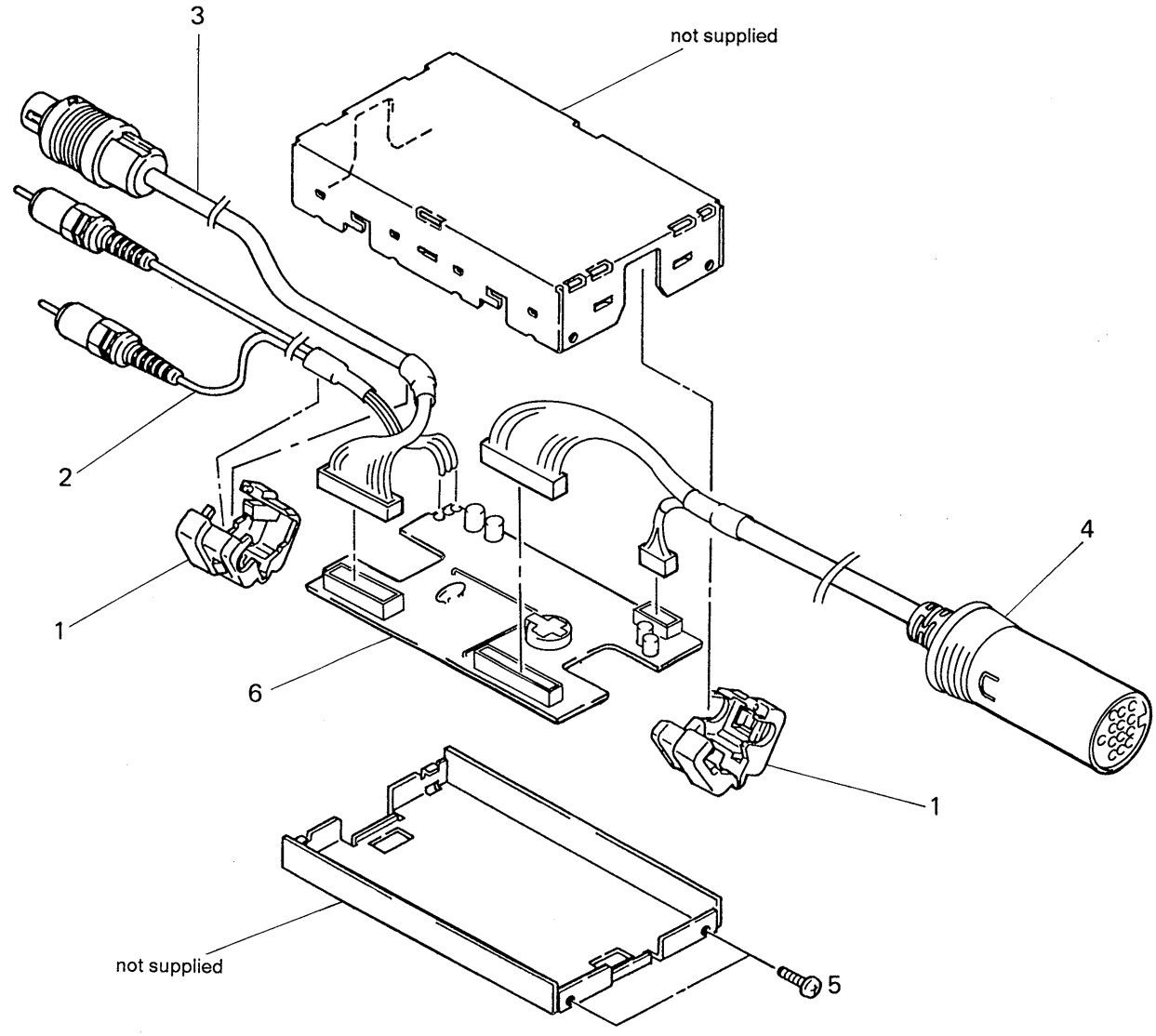
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- B+ : B + Line.
- Power voltage is from the head unit fed.
- Voltages and waveforms are dc with respect to ground under conditions that the set is connected between the master unit and the CD changer.
  no mark : CD PALY
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

SECTION 3
EXPLODED VIEW

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.



Ref. No.	Part No.	Description	Remark
1	2-352-626-01	BUSHING, CORD	
2	1-769-136-11	CORD (WITH PLUG) (RCA)	
3	1-769-135-11	CORD (WITH CONNECTOR) 8P (UNILINK)	
4	1-769-134-11	CORD (WITH CONNECTOR) (DIN) 13P	
5	7-621-773-86	SCREW +BV 2.6X4	
* 6	A-3298-373-A	MAIN BOARD, COMPLETE	

SECTION 4
ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3298-373-A	MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-124-234-00	ELECT	22uF	20%	16V
C2	1-124-234-00	ELECT	22uF	20%	16V
C3	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C4	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C5	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C6	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C7	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C8	1-124-234-00	ELECT	22uF	20%	16V
C9	1-124-234-00	ELECT	22uF	20%	16V
C10	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C11	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C12	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C13	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C14	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C15	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C16	1-124-480-11	ELECT	470uF	20%	25V
		< CONNECTOR >			
* CN1	1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN2	1-506-990-11	PIN, CONNECTOR (PC BOARD) 8P			
* CN3	1-506-993-11	PIN, CONNECTOR (PC BOARD) 11P			
		< DIODE >			
D1	8-719-801-78	DIODE	1SS184		
D2	8-719-801-78	DIODE	1SS184		
D3	8-719-801-78	DIODE	1SS184		
D4	8-719-801-78	DIODE	1SS184		
D5	8-719-106-08	DIODE	RD6.2M-B2		
D6	8-719-106-44	DIODE	RD9.1M-B2		
D7	8-719-106-08	DIODE	RD6.2M-B2		
D8	8-719-801-78	DIODE	1SS184		
D9	8-719-106-08	DIODE	RD6.2M-B2		
D10	8-719-801-78	DIODE	1SS184		
D11	8-719-801-78	DIODE	1SS184		
D12	8-719-106-08	DIODE	RD6.2M-B2		

Ref. No.	Part No.	Description		Remark
		< IC >		
IC1	8-759-208-11	IC	TC4053BFHB	
IC2	8-759-205-62	IC	TC4050BF	
IC3	8-759-097-36	IC	RH5VA40AA	
IC4	8-759-198-50	IC	uPD75512GF-193-3B9	
IC5	8-759-981-65	IC	LM2903M	
		< TRANSISTOR >		
Q1	8-729-901-01	TRANSISTOR	DTC144EK	
Q2	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q3	8-729-901-01	TRANSISTOR	DTC144EK	
Q4	8-729-901-01	TRANSISTOR	DTC144EK	
Q5	8-729-901-01	TRANSISTOR	DTC144EK	
Q6	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q7	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q8	8-729-921-25	TRANSISTOR	FMC2	
Q9	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q10	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q11	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q12	8-729-921-25	TRANSISTOR	FMC2	
Q13	8-729-901-01	TRANSISTOR	DTC144EK	
Q14	8-729-901-01	TRANSISTOR	DTC144EK	
Q15	8-729-921-25	TRANSISTOR	FMC2	
Q16	8-729-921-25	TRANSISTOR	FMC2	
Q17	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q18	8-729-920-74	TRANSISTOR	2SC2412K-QR	
		< RESISTOR >		
R1	1-216-073-00	METAL CHIP	10K 5%	1/10W
R2	1-216-041-00	METAL CHIP	470 5%	1/10W
R3	1-216-089-00	METAL CHIP	47K 5%	1/10W
R4	1-216-073-00	METAL CHIP	10K 5%	1/10W
R5	1-216-073-00	METAL CHIP	10K 5%	1/10W
R6	1-216-073-00	METAL CHIP	10K 5%	1/10W
R7	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R8	1-216-079-00	METAL CHIP	18K 5%	1/10W
R9	1-216-079-00	METAL CHIP	18K 5%	1/10W
R11	1-216-073-00	METAL CHIP	10K 5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R12	1-216-041-00	METAL CHIP	470	5%	1/10W
R13	1-216-041-00	METAL CHIP	470	5%	1/10W
R14	1-216-075-00	METAL CHIP	12K	5%	1/10W
R15	1-216-075-00	METAL CHIP	12K	5%	1/10W
R16	1-216-073-00	METAL CHIP	10K	5%	1/10W
R20	1-216-105-00	METAL CHIP	220K	5%	1/10W
R21	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R22	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R23	1-216-041-00	METAL CHIP	470	5%	1/10W
R24	1-216-041-00	METAL CHIP	470	5%	1/10W
R25	1-216-041-00	METAL CHIP	470	5%	1/10W
R26	1-216-041-00	METAL CHIP	470	5%	1/10W
R27	1-216-041-00	METAL CHIP	470	5%	1/10W
R28	1-216-041-00	METAL CHIP	470	5%	1/10W
R29	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R30	1-216-105-00	METAL CHIP	220K	5%	1/10W
R31	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R32	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R33	1-216-081-00	METAL CHIP	22K	5%	1/10W
R34	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R35	1-216-105-00	METAL CHIP	220K	5%	1/10W
R36	1-216-105-00	METAL CHIP	220K	5%	1/10W
R37	1-216-073-00	METAL CHIP	10K	5%	1/10W
R38	1-216-081-00	METAL CHIP	22K	5%	1/10W
R39	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< VIBRATOR >			
X1	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)			

****

MISCELLANEOUS
****

2	1-769-136-11	CORD (WITH PLUG) (RCA)
3	1-769-135-11	CORD (WITH CONNECTOR) 8P (UNILINK)
4	1-769-134-11	CORD (WITH CONNECTOR) (DIN) 13P

****

ACCESSORIES & PACKING MATERIALS
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